

CLAIMS

- Sub A1
1. A composite intended for medical use, in particular surgical or therapeutic use, characterized in that it comprises
- a thermoplastic component plasticizable within the temperature range $-10^{\circ}\text{C} \dots +100^{\circ}\text{C}$, which is substantially made up of hydroxy acids and structural units derived from hydroxy acid derivatives, and the molar mass of which is within the range $10,000 - 1,000,000 \text{ g/mol}$, and which degrades in the body typically within a period ranging from a few days to several years, and which in its solid state is a mechanically strong plastic or rubbery material, and
 - a bioactive component, which is a bioactive glass, a bioactive xerogel, a bioactive ceramic material, coral or a coral-based product, or a bioactive glass ceramic material.
2. The composite according to Claim 1, characterized in that the plastic component is plasticizable within the temperature range $5^{\circ}\text{C} \dots 70^{\circ}\text{C}$, preferably within the temperature range $37^{\circ}\text{C} \dots 55^{\circ}\text{C}$.
3. The composite according to Claim 1 ~~or 2~~, characterized in that the plasticized plastic component remains moldable for a certain period even after the temperature of the composite has been lowered to a temperature which is considerably lower than the setting temperature of the said plastic component.
4. The composite according to Claim 1, ~~2 or 3~~, characterized in that the plastic component is biodegradable in a controlled manner within the time range 1 week - 3 years.
5. The composite according to Claim ~~3~~, characterized in that the structural unit is an L-, D- or DL-lactic acid; an L-, D- or DL-lactide; or epsilon-caprolactone.

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5. The composite according to Claim ⁴5, characterized in that the plastic component is a copolymer based on structural units of L-lactide and epsilon-caprolactone.

6. The composite according to Claim ⁵6, characterized in that the composition of the copolymer is within the range

10240

$$\frac{\text{epsilon-caprolactone}}{\text{L-lactide}} = 2/98 \dots 98/2$$

7. The composite according to Claim ⁶7, characterized in that

10241

$$\frac{\text{epsilon-caprolactone}}{\text{L-lactide}} = 4 : 1$$

8. The composite according to Claim ⁷8, characterized in that the molar mass of the copolymer is approx. 30,000 - 300,000 g/mol.

9. The composite according to ^{Claim 1}any of the above claims, characterized in that the bioactive component is present as separate particles in the composite.

10. The composite according to Claim ⁹10, characterized in that the separate particles are fibers, porous pieces, microparticles or glass beads.

11. The composite according to ^{Claim 1}any of the above claims, characterized in that the plastic component and/or the bioactive component contains one or more additives.

12. The composite according to ^{Claim 1}any of the above claims, characterized in that the plastic component and the bioactive component form a dense piece.

13. The composite according to ^{Claim 1}any of Claims 1 - 12,

characterized in that the plastic component forms a porous piece.

1414/ 15. A blend, intended for the preparation of a composite according to ^{Claim 1} ~~any of Claims 1-14~~, characterized in that the plastic component and the bioactive component in the blend are in powder form.

15/ 16. A coating, membrane, net, powder, fiber, thread, adhesive, or a piece such as a plate, bead, tube, nail or rod, prepared from the composite according to ^{Claim 1} ~~any of Claims 1-14~~.

17. The use of a composite according to ^{Claim 1} ~~any of Claims 1-14~~ for the preparation of any of the following products:

- a bone or cartilage application, such as a filling material for bone or cartilage, a product intended for the repairing of long bones, a plate for the repairing of the back of the eye or facial bones, a bone cement, an adhesive for joining the product to a tissue or tissues, an implant coating, a piece for the repairing of the vertebral column, and a skull plate,
- a tooth or jaw application, such as a temporary tooth filling material, a temporary or permanent tooth root filling material, a parodontal product, a product to be placed in the cavity left by an extracted tooth, a tooth cement, a temporary tooth cement, a temporary crown material, a tooth implant coating, an occlusion index rail, a surgical paste, and a template material, which may be, for example, a paste, ring or thread to be fitted in a gingival pocket,
- a cartilage coating,
- a tissue guiding membrane or tube,
- a protective cloth, a wound dressing, or an adhesive tape,
- a carrier for an active agent, such as a drug, or for some other biological structure.

add A

add B2